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IS 13112 (1991): Cargo securing systems for general purpose freight containers - General requirements [TED 12: Freight Containers and Pallets]

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सामान्य प्रयोजन के लिए माल-धारकों में माल सुरक्षा तंत्र — सामान्य अपेक्षाएं

Indian Standard

CARGO SECURING SYSTEMS FOR GENERAL PURPOSE FREIGHT CONTAINERS — GENERAL REQUIREMENTS

UDC 621·869·88

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

May 1991 Price Group 1

Freight Containers Sectional Committee, HMD 12

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Freight Containers Sectional Committee had been approved by the Heavy Mechanical Engineering Division Council.

The purpose of cargo securing system is to restrain the movement of the cargo inside the container resulting from dynamic forces induced during transportation. Cargo securing system may consist of :

- — shoring,
- — cargo securing devices, and
- — combination of both.

This standard describes cargo securing devices only.

Indian Standard

CARGO SECURING SYSTEMS FOR GENERAL PURPOSE FREIGHT CONTAINERS — GENERAL REQUIREMENTS

1 SCOPE

This standard specifies the general requirements, testing and marking of cargo securing devices for general purpose freight containers.

2 REFERENCE

Indian Standard IS 6566 : 1972 Dimension and ratings of ISO series 1 Freight containers is necessary adjunct to this standard.

3 TERMINOLOGY

3.0 For the purpose of this standard the following definitions shall apply.

3.1 Cargo Securing Device

They are permanent fixtures to which lashings such as ropes, straps, chains, cables, etc may be attached. Such devices are not intended for the purposes of handling or securing of containers. They may be either fixed, hinged or sliding eyes/rings/bars.

3.2 Anchor Points

These are securing devices located in the base structure of the container.

3.3 Lashing Points

These are securing devices located in any part of the container other than their base structure.

4 GENERAL REQUIREMENTS

4.1 For general purpose containers cargo securing devices are optional. However, when fitted they shall comply with the requirements given in the subsequent clauses.

4.2 Cargo securing devices shall not infringe on the prescribed minimum internal dimensions of the ISO containers as given in IS 6566 : 1972.

4.3 The minimum number, (N) of cargo securing devices shall be :

a) For anchor points :

for 1AA, 1A 1AX containers, N=16;
for 1BB, 1B, 1BX containers, N=12;
for 1CC, 1C, 1CX containers, N=10; and
for 1D, 1DX containers, N=8;

b) For lashing points (N)=unspecified.

4.4 Additional anchor points may be provided along the length and/or the width of the container but neither anchor points nor lashing points shall be installed on the sill or the lintle of a doorway.

4.5 To allow:

a) for passage of the lashing lines through the apertures of cargo securing devices; or

b) for the attachment of restraint fixtures such as hooks, clips, shackles, bars, etc.

cargo securing devices shall provide on all sides, an unobstructed access for a minimum of 50 mm from any fixed container surface.

4.6 Each anchor point is prescribed in **4.3** (a) and **4.4** shall be designed and installed to withstand a minimum rated load of 1 000 kg applied in any direction.

4.7 Each lashing point as prescribed in **4.3** (b) shall be designed and installed to withstand a minimum rated load of 500 kg applied in any direction.

5 TESTING

5.1 Each type of cargo securing devices shall be proof tested to a tensile force equal to 1.5 times the rated load, using hook or a shackle having a maximum diameter of 10 mm. Depending on the location of the cargo securing devices, the proof load shall be applied as follows:

a) For cargo securing devices fitted on the base structure the test force shall be applied in a direction perpendicular to the axis of the container structural member to which it is attached and at an angle of 45° of the horizontal plane.

b) For cargo securing devices installed at the positions above the floor the test force shall be applied at 45° upwards and downwards from the horizontal plane, wherever possible.

c) For cargo securing devices installed at the roof plane (or other extreme heights) the test force shall be applied at an angle of 45° downward.

5.2 The tensile force shall be continuously applied at the prescribed angles for a period of 5 minutes.

5.3 Upon completion of the test, neither the cargo securing devices, nor its attachment to the container structure, nor the container structure itself shall show any permanent deformation or abnormality which may render it unsuitable for continuous service at full rated load.

5.4 When containers are fitted with cargo securing devices of different types, at least one device of each type shall be tested.

6 MARKING

6.1 The rated load of each cargo securing device, equal to or less than 66 percent of the 45° test load, shall be marked on a permanent surface of the container, adjacent to the rated device, in characters of contrasting colour and of 20 mm height or greater.

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